AMENDMENTS TO THE CLAIMS

1-8. (Canceled)

9. (Withdrawn-Previously Presented) A method for producing a synthetic quartz glass ingot comprising feeding a silica-forming compound, a combustible gas and a combustion-supporting gas to the burner of claim 1.

10-12. (Canceled)

13. (Withdrawn-Previously Presented) A method for producing a synthetic quartz glass ingot comprising:

feeding a silica-forming compound, a combustible gas and a combustion-supporting gas to a burner to form fine silica particles; and

melting and vitrifying the fine silica particles,

wherein

the burner comprises a multi-tube assembly of a three tube construction consisting of a center tube for feeding the silica-forming compound, a first outer tube surrounding the center tube for feeding the combustion-supporting gas and a second outer tube surrounding the first outer tube for feeding the combustible gas, a first tubular shell surrounding the multi-tube assembly, a plurality of first nozzles disposed within the first tubular shell, a second tubular shell surrounding the first tubular shell and a plurality of second nozzles disposed within the second tubular shell.

14. (New) A burner for use in the manufacture of synthetic quartz glass, comprising a main burner comprising:

a multi-tube assembly of a three tube construction consisting of a center tube for feeding a silica-forming compound, a first outer tube surrounding the center tube for feeding a combustion-supporting gas, and a second outer tube surrounding the first outer tube for feeding a combustible gas;

a first tubular shell surrounding the multi-tube assembly for feeding a combustible gas;

a plurality of first nozzles disposed within the first tubular shell for feeding a combustion-supporting gas;

a second tubular shell surrounding the first tubular shell for feeding a combustible gas; and

a plurality of second nozzles disposed within the second tubular shell for feeding a combustion-supporting gas, wherein

the center tube is connected to a silica-forming compound source,

the first outer tube is connected to a combustion-supporting gas source,

the second outer tube is connected to a combustible gas source,

the first tubular shell is connected to a combustible gas source,

the first nozzles is connected to a combustion-supporting gas source,

the second tubular shell is connected to a combustible gas source; and

the second nozzles is connected to a combustion-supporting gas source.

15. (New) The burner of claim 14, wherein the total cross-sectional area of gas discharge ports of the first nozzles disposed in the first tubular shell accounts for at least 5% of the cross-sectional area of an annular space between the multi-tube assembly and the first tubular shell.

16. (New) The burner of claim 14, wherein the total cross-sectional area of gas discharge ports of the second nozzles disposed in the second tubular shell accounts for at least 5% of the cross-sectional area of an annular space between the first and second tubular shells.

17. (New) The burner of claim 14, further comprising a tubular jacket disposed outside the main burner to surround at least an end portion thereof.

18. (New) The burner of claim 14, wherein the combustion-supporting gas fed through the first outer tube is oxygen gas.

19. (New) The burner of claim 18, wherein the combustion gas fed through the second outer tube is hydrogen gas.

20. (New) The burner of claim 19, wherein the combustion gas fed through the first and second tubular shells is hydrogen gas.

21. (New) The burner of claim 20, wherein the combustion-supporting gas fed through the first and second nozzles is oxygen gas.

22. (New) The burner of claim 15, wherein the total cross-sectional area of gas discharge ports of the first nozzles disposed in the first tubular shell accounts for 8 to 13% of the cross-sectional area of an annular space between the multi-tube assembly and the first tubular shell.

23. (New) The burner of claim 22, wherein the total cross-sectional area of gas discharge ports of the second nozzles disposed in the second tubular shell accounts for 8 to 13% of the cross-sectional area of an annular space between the first and second tubular shells.